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ABSTRACT

Wisconsin has a local options competency-testing policy for public schools: participating districts receive state assistance, but are subject to regulations on test development and use. This paper examines influences on school district program adoption, focusing on local support for any testing program and superintendents' attitudes toward state mandates. School district participation is a policy innovation; local support, an adopter characteristic; and state program incentives and disincentives, innovation attributes. The purposes of the study are to: (1) clarify the importance of incentives and disincentives for adopters and nonadopters of a competency based testing (CBT) policy; (2) examine the relationship between local support and participation in the state CBT program; and (3) investigate the relationship between local support and state incentives and disincentives. Findings, based on a 1984 survey of school district superintendents, show that local districts sharing the state's goal of competency assessment are more likely to enroll in the state-sponsored CBT policy. Early adopters demonstrate greater local support and less negative attitudes toward state regulation, and districts characterized as likely future adopters show stronger local support and more positive attitudes toward state services. Adopter characteristics and innovation attributes must therefore be studied together. The local control issue may delay initial participation, but state assistance encourages later adoption. Tables are included that demonstrate the relationship among local support, legislative provisions, and differences between adopters and nonadopters. (LMI)

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WISCONSIN'S EDUCATIONAL REFORM: PATTERNS OF ADOPTION

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ABSTRACT
"Electing Competency Testing: Local Support and Program Incentives in Wisconsin"

Wisconsin has a local option competency-testing policy for public schools: participating districts receive state assistance, but are subject to regulations on test development and use. This paper examines school district participation by focusing on the importance of influences on program adoption: local support for any testing program and superintendents' attitudes towards state mandates. School district participation is a policy innovation; local support, an adopter characteristic; and state program incentives and disincentives, innovation attributes.

Early joiners show both stronger local support for a testing program and less negative attitudes toward state mandates. Future adopters evidence greater local support and more positive attitudes towards state assistance. These results suggest that both adopter characteristics and innovation attributes are factors in decisions to join the state's program. The local control issue may delay initial participation, but for later adopters state assistance dampens resistance to state mandates.

INTRODUCTION

American state governments legislate a variety of program requirements for their local school districts. These state mandates include a wide range of regulatory policies, including but not limited to, curriculum specifications, teacher certification standards, textbook selection limitations, and student or teacher testing requirements. In fact, there has been increasing state educational policy centralization for the last three decades.(Jarolimek,1981) That is, state governments have enacted more state-wide regulatory standards and consequently limited local school district policy options. Recently, this centralizing tendency has gained impetus from pervasive criticisms of the performance of public school graduates; one of the salient indicators of failure has been declining student test scores on nationally standardized college entrance examinations (Johnston, 1985).

In response to the problem of declining student performance, most of the states have established state-wide competency-based testing (CBT) programs to monitor student achievement; and in some cases, tests results serve as the basis for grade-level promotion or graduation (Pipho, 1981).

The pattern or state versus local control in these state-sponsored testing policies varies: some states have exclusive central control; others divide program responsibilities with local school districts; and still others have chosen local option policies. The states in the North Central and Eastern regions generally have the most decentralized programs, while greater state control is apparent in the South and West (Brunger and Clark, 1982).

The purpose of this paper is to examine CBT program adoption in the context of a local option state, one in the North Central region-- Wisconsin. In

1982, this state created a CBT program, but made participation by its 432 school districts voluntary.[1] Districts that elect participation receive state financial and technical assistance, but are then subject to a series of state mandates related to test development and the use of test results. On the other hand, the law clearly leaves important aspects of the testing program to local discretion (State of Wisconsin, 1981).

More specifically, the Wisconsin Competency-Based Testing Program (WCBT) legislation contains fifteen provisions detailing state services, local options, and state mandates for program participation. State services are regarded here as program incentives--inducements for local district enrollment. Similarly, local options constitute incentives by making it clear that school districts retain elements of local control even if they join the state's program. Conversely, the legislation contains possible disincentives--state mandates for program operation.

There are four state services components (incentives)--(1) the Department of Public Instruction (DPI) provides technical assistance, (2) the DPI develops competency tests at no cost to districts, (3) districts are reimbursed for test administration costs, and (4) the DPI develops a computerized bank of test items.

Local options (incentives) include these four items: (1) districts choose grade levels for testing, (2) districts decide whether to use tests for graduation or promotion, (3) districts may adopt tests from four sources including those written locally, and (4) districts may set pass/fail standards.

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[1]The authors are grateful to the Wisconsin Department of Public Instruction for their assistance in this project. The authors however, are solely responsible for the content of this paper.

The remaining seven items, disincentives, deal with state regulations for participating districts: (1) districts must provide written test reports to parents, (2) districts must provide a parent-teacher conference for students who fail, (3) the school administrator must report tests results to the school board, (4) the school board must develop a skills improvement plan, (5) districts may not use test results to dismiss or discipline teachers, (6) the state makes special provision for students not proficient in English, and (7) tests developed by districts must be approved by the State Superintendent.

It is evident that Wisconsin local option program not only addresses the issue of state versus local control over educational policy-making, but it also highlights another--managerial professionalism. That is, CBT programs constitute a management system responsive to multiple goals: certification of student competencies, objective standards for grade promotion or graduation, identification of students requiring remediation, and evaluation of reforms intended to enhance student achievement (Buchmiller, 1979).

The state's moralistic political culture and reformist orientations typically support managerial professionalism (Jacob and Vines, 1976). However, it is likely that there are differences among school districts in terms of support for these managerial norms. More specifically, some districts may be more supportive of CBT as a necessary educational management tool for their district than others. Consequently, a district's willingness to join Wisconsin's program may not be based entirely on the incentives and disincentives in the legislation, but on the level of local support for the **concept** of a competency-based testing program. In other words, it is possible that districts evidence more or less support for the goals inherent in a testing program than others-- regardless of available state services for program implementation, retention of local options under

the state's program, or state mandates incorporated in the legislation. In effect, the issue may not be state versus local control, but lack of local support for any competency-based testing program.

Framework for Analysis

Local school district participation in the state's CBT program is treated here as an innovation, the first-time adoption of a new program. As a result, an examination of the relative importance of local support for a testing program and district attitudes toward state incentives and disincentives in the WCBT legislation is a comparison of the the salience of an adopter characteristic (local program support) and innovation attributes (state program incentives and disincentives).

The issue of whether adopter characteristics or innovation attributes better characterize the pattern of diffusion in new program adoptions is one of the major controversies found in the state-local policy innovation literature of political science. In fact, this question separates two of the best-known articles on state program innovation: those of Walker and Grey (Walker, 1969; Gray, 1973). The adopter-characteristics emphasis is based on the argument that there are those actors in a system who are typically more venturesome, others who are more cautious, and still others who are usually resistant to change. Thus, the venturesome are the earliest adopters of new programs, and the resistant, the last or nonadopters.

The innovation-attribute thesis, on the other hand, is based on the argument that actors respond to program characteristics: for example, costs, complexity, or prestige-conferring qualities. The diffusion of an innovation is then dependent on its characteristics, and different innovations will show different patterns of diffusion.

This study also focuses on an aspect of intergovernmental relations-the nature of the interaction between school district desires for a CBT program and program incentives and disincentives offered in the state's version. Welch and Thompson underscored this interplay of local pressures for adoption and federal incentives in their study of the federal government's impact on state policy innovation: "Because of the interaction between the state's desires and federal demands, it is often difficult to untangle federal incentives from the state's request to do something that it wants and needs to do" (Welch and Thompson, 1980).

Mohr expresses this decision-making calculus more succinctly in his treatment of organizational innovation: "Innovation is directly related to the motivation to innovate, inversely related to the strength of obstacles to innovation, and directly related to the availability of resources for overcoming such obstacles" (Mohr, 1969).

For Wisconsin school districts, then, local support for a testing program suggests a desire for innovation, and participation in the state's program may represent the necessary slack resources (tests, technical assistance, funds for test administrative expenses, and local options). However, the state policy may also contain obstacles to innovation--state mandates specifying requirements regarding the use of test results. This study will attempt to clarify the importance of these incentives and disincentives for program adopters and nonadopters. Additionally, this analysis will examine the relationship between local support for a CBT program and participation in the state's program. Finally, the relative importance of local support for a program and state program incentives and disincentives will be addressed.

Data for this analysis come from a 1984 survey of school district superintendents; the survey was conducted by the Wisconsin Department of Public Instruction, and the response rate was 80 per cent. According to survey results, one- third of the school districts responding were enrolled in the state's program; and another eighteen per cent of respondents said that it was likely their districts would join in the next one or two years.

These responses on program status provide information on the two dependent variables employed here: (1) participation or nonparticipation in the state's program by 1984 and (2) districts likely or unlikely to join the state's program in the next two years.

Superintendents characterized the strength of local support for a competency testing program--not necessarily the state's policy. They rated local support for several community groups: the school board, school administrators, teachers, students, and the general population. Ratings span a five-point scale from very weak support to very strong support.

Next, superintendents were asked to indicate the degree of support for the fifteen provisions of the state legislation-- a mixture of state incentives and disincentives. Ratings on a five-point scale ranged from the perception that a legislative provision was a negative feature to the perception that it was a positive feature. Additionally, respondents were surveyed in terms of overall ratings of the WCBT. The following general statements were rated on a five-point scale ranging from strongly agree to strongly disagree: (1) The program represents movement away from the state's tradition of "local control," and (2) The DPI should assume more of the costs of program development, such as costs of curriculum development, remediation, etc.

The initial issue here is an investigation of possible relationships between superintendents' perceptions of local support for any testing

program and attitudes toward incentives and disincentives in the state's legislation. The presence of strong relationships would suggest that local program support and favorable attitudes towards the state program occur together. On the other hand, the absence of strong relationships would suggest that these factors operate as more independent influences on the decision to join the state's program. This question will be addressed by examining a correlation matrix (Pearsonian r's) between local support factors and legislative program features.

The next question is an investigation of possible relationships between local support for a CBT policy and participation in the state's program. The expectation is that districts supportive of the testing concept will be more likely to join the state's program.

The third question focuses on the discovery of possible relationships between support for legislative provisions and participation and nonparticipation in the state's program. The expectation is that districts that have enrolled in the state program see state incentives in a more positive light than nonadopters and see disincentives as less negative than nonadopters.

In both cases, the method for identification of significant relationships is analysis of variance.

Finally, a stepwise regression analysis is employed to provide information on the relative importance of particular local support and program attributes for districts that elect participation or nonparticipation in the state's program.

Findings

The initial issue here involves possible relationships between superintendents' perceptions of local support for a CBT program and attitudes towards the legislative provisions of the state's program. An examination of simple correlation coefficients suggests that there is little similarity between perceptions of local support for a program and consequent evaluations of the state's policy incentives. That is, there are no significant correlations (.01 level) between superintendents' perceptions of local program support and any legislative provisions pertaining either to state financial incentives or local option decisions. Instead, Table 1 shows that significant associations occur between local support measures and several disincentives: state requirements for providing a written report of test results to parents, a required parent-teacher conference for students who fail, a mandated district report of test program results, a stipulated response by the board in the form of a skills improvement plan, and test approval by the state Superintendent.

"Table 1 about here."

All correlations are positive, suggesting that where there are higher levels of local program support, state program disincentives are regarded as less negative. None of these correlations are strong; most fall below the .30 level. For all other program provisions, superintendents' ratings are independent from their perceptions of local program support.

The next question in the analysis concerns possible relationships between superintendents' perceptions of local program support (by school boards, administrators, teachers, students, and the general population) and participation in the state's CBT program. Analysis of variance results show

that there are statistically significant differences (.01 level) between enrollment in the state's program and all of the local support measures. In general, the greater the local support (perceived by the superintendent) for any competency testing program, the more likely a district will join the state's program.

The same pattern of relationships emerges when local support measures and future adoption probabilities are considered. All relationships between likely or unlikely future participation and local support indicators are statistically significant (.01 level). Likely participation in the state's program is associated with higher levels of local support for the concept of a competency testing program.

In general, then, when local districts share the state's goal of the desirability of a program for assessing student competencies, they are more likely to enroll in the state-sponsored policy. An adopter characteristic, local program support, is related to the decision to innovate-- participation in the WCBT.

The next question is whether districts who join WCBT differ from those who do not in terms of superintendents' attitudes towards components of the state's program, and if so, which ones.

Table 2 shows that program adopters differ significantly from nonadopters on superintendents' support for over half (nine) of the fifteen CBE legislative components. These items include both state incentives and disincentives for local program participation. One incentive deals with state financing of program costs; two others involve local options-- districts setting pass/fail standards and choosing whether to use test results for graduation. The remaining six disincentives relate to the mechanics of the testing

program: (1) test approval by the State Superintendent, (2) the prohibition against local districts using test results for dismissing teachers, (3) reporting district results to the school board and (4) the development of a skills improvement plan, (5) the requirement that districts suggest parent-teacher conferences for students who fail, and (6) the provision of written reports of a child's performance to parents or guardians.

"Table 2 about here."

In other words, two-thirds of the differences between districts that have joined the state's program and those that have not center on policy disincentives--rather than incentives. These five items include state test approval and the use of test results by local school districts; all are state mandates governing program operation. Furthermore, adopters and nonadopters show a statistically significant difference (analysis of variance results) in superintendents' responses to this question-- "The program represents movement away from the state's tradition of local control." That is, adopters are less likely to support this assertion of diminished local control than nonadopters. On the other hand, there is not a significant difference between the two groups on another question-- "The DPI should assume more of the costs of program development, such as costs of curriculum development, remediation, etc."

Thus, it appears that the issue of local control is initially germane in separating districts who join the state's program and those who do not. State incentives do not seem to mitigate against the obstacle of diminished local control for nonadopters.

Conversely, Table 3 indicates that among districts characterized as likely or unlikely future program participants, the differences are primarily over incentives-- specifically DPI test development, test financing, and test item development). The only other statistically significant difference involving a program disincentive is test approval by the State Superintendent. Additionally, there are statistically significant differences (analysis of variance results) among likely and unlikely participants in responses to this question-- "The DPI should assume more of the costs of program development, such as costs of curriculum development, remediation, etc." That is, potential nonadopters were more supportive of the need for an increased state financial commitment than potential adopters. There are no differences between the two groups on the question suggesting that the program represents movement away from local control.

"Table 3 about here."

Thus, likely or unlikely adopters differ on only four (as opposed to nine) legislative provisions, three of them germane to state incentives. In both cases, innovation attributes are related to the decision to innovate.

In summary, there are differences both among program participants and nonparticipants and likely or unlikely adopters on both local support for a CBT program and their affect (positive or negative) for legislative provisions in the state's policy. However, the differences between early adopters and nonadopters focus primarily on state regulations for the use of test results, while future program participants are better differentiated by the value placed on state services--test development and financing.

The final step in the analysis is intended to identify the most salient differences among school districts, both in terms of local support levels and

superintendents' attitudes toward state legislative provisions. As a result, all local support and program (provisions or general characterizations) indicators showing statistically significant differences in the analyses of variance were incorporated in a multiple, step-wise regression analysis.

For current adopters and nonadopters, four factors show statistically significant relationships; two are local support measures (school board, b= .16 and administration, b= .25). One legislative provision is a local option--choosing whether to link test performance to graduation (b= .13); and one, a state mandate--the requirement for test approval for the state superintendent (b= .19). Beta coefficients are significant at the .01 level, and their magnitudes suggest changes in the dependent variables associated with changes in levels of local support or attitudes toward state legislation. (See Table 4 for a summary of regression analysis results.) That is, program adoption is associated with high levels of local support from the school board and administrators and superintendents are highly supportive of the district's ability to choose whether to link test performance to graduation. Finally, superintendents are less negative about test approval by the State Superintendent than their counterparts in nonadopting districts.

For those likely or unlikely to join the state's program in the future, three factors appear statistically significant--one local indicator (school board support, b= .42; one state service, development of a test-item data bank, b= .22; and one state mandate, the requirement for test approval by the State Superintendent, b= .21. (See Table 4 for a complete summary of regression analysis results.)

"Table 4 about here."

A comparison of the two regression analysis results shows that two types of indicators appear in both cases-- an adopter characteristic (school board or administration support) and an innovation attribute (test approval by the State Superintendent). In both cases, the stronger influence (standardized beta coefficient) is tied to a local support indicator.

Discussion

The analysis of variance results show that both adopter characteristics and innovation attributes are involved in the decision about program participation --whether initial adoption or future enrollment probabilities. Results here do not demonstrate how this calculus works, but suggest some possibilities.

If there is strong local support for a competency testing program, and state disincentives regulating test use do not appear as major obstacles for superintendents, then innovation is more likely. In other words, for initial adopters state incentives are not the key to understanding initial program enrollment. The earliest adopters in this case generally cannot be differentiated from nonadopters on the basis of greater enthusiasm for either state resources or local options contained in the legislation. Instead, the early adopters are both less negative about state mandates than nonadopters and more supportive of the CBT concept.

Two conditions are satisfied--districts want a testing program and there is not intensive resistance to state controls in a testing program. Furthermore, there is some relationship between superintendents' perceptions of local program support and attitudes toward state mandates the greater the local support, the less resistance to state program regulation. Perhaps relatively high levels of enthusiasm for a testing program decrease

resistance to state control, since the local administration and school board share the desirability of the state's goal in establishing competency testing.

On the other hand, it is interesting to note the contrast for potential participants-- state incentives are more salient than disincentives for understanding adoption or nonadoption decisions. That is, district superintendents who are more positive about both local support for a program and the availability of state resources for program operation are the ones who report their districts are likely to join the program in the future. For later adopters then, state incentives may function as a "carrot" for influencing program enrollment. These districts generally do not seem any more concerned about the "costs" of state controls than unlikely future nonadopters. The incentives for innovation, then, for these districts are local support for a program and the desirability of state assistance for a program.

Whatever interpretation is placed on these results, one thing does seem clear--a singular concentration on either adopter characteristics or innovation attributes provides only a partial picture of the diffusion of innovations in the context of Wisconsin school districts. Additionally, it appears that local option federalism involves more than monetary carrots to overcome resistance to state controls. Another factor involved in the adoption of local option policies is the level of local support for the goals of state policy; and there is some evidence here that local support levels provide the stronger-- if not the exclusive--influence on adoption patterns.

First, it appears that local support for a program from the school board and/or the administrative staff is more crucial than support from teachers, students, or the general population. Since the board and the administrative staff are key policymakers ultimately responsible for the

decision regarding program participation, it is not surprising that most superintendents perceive support from these groups as crucial.

In reference to legislative provisions, it seems that test approval by the State Superintendent is a major point of contention both in delaying or precluding the decision to enroll in the state's program. This mandate may symbolize "state control" more than other requirements that deal with the use of test results.

Early adopters are especially positive to to their retaining the choice whether to link test performance to graduation or promotion. Likely future adopters, on the other hand, show favorable attitudes to state development of test items.

In general, these results suggest that the state government might encourage local district enrollment by fostering local support for the CBT program concept, consider eliminating test approval by the State Superintendent, stressing the availability of a test-item data bank for districts that have not yet enrolled in the program, or consider increasing the state's share of program costs for curriculum development and remediation.

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TABLE 1

Significant Correlations Between Local Support Levels and Legislative Provisions [a]

	LOCAL SUPPORT LEVELS				
	Board	Admin	Teachers	Students	Community
Written Report of Test Results	.21	.27	.21	.23	.22
Required Parent-Teacher Conference	.24	.25	.25	.30	.27
District Report	.30	.32	.26	.35	.23
Improvement Plan	.29	.30	.27	.32	.23
Approval by Superintendent	.19	.20	.23	--	--

[a] These Pearsonian correlation coefficients are significant at the .01 level. If no correlation appears, then the relationship is not significant.

TABLE 2.

Legislative Provisions: Differences Between Program Adopters and Nonadopters[a]

1. Districts are to be reimbursed for printing and scoring costs associated with testing, if they use competency tests other than those developed by the DPI.

2. Participating districts can choose whether or not to link performance on the competency tests to graduation.

3. Participating districts are required to provide a written report of each child's performance to the child's parent or guardian.

4. If a child fails to meet the district's competency requirements, the district shall suggest a conference with the child's parent or guardian to discuss the test results and recommend remedial services.

5. Annually, the school district administrator is to report the results of competency testing to the school board and to recommend possible changes in the district's educational program to address problem areas.

6. Upon receipt of the annual report from the school district administrator, the school district is to establish a basic skills improvement plan which includes a written response to each of the school administrator's recommendations.

7. Participating districts determine local performance (pass/fail) standards.

8. Results of competency testing can be used to evaluate teachers, but can not be used to discharge, suspend, formally discipline, or nonrenew teachers.

9. District competency tests must be approved by the State Superintendent.

[a]Differences are statistically significant at the .01 level or better. The technique is analysis of variance; and a t-test is used, since there are two cells-- adoption or nonadoption.

TABLE 3.

Legislative Provisions: Differences Between Likely Adopters and Unlikely Adopters *

1. The DPI is to develop competency tests and make them available at no cost to participating districts (including scoring and reporting costs).

2. Districts are to be reimbursed for printing and scoring costs associated with testing, if they use competency tests developed by the DPI.

3. District tests must be approved by the State Superintendent.

4. The DPI is required to develop a computerized bank of test items which can be used by participating districts to develop customized objective-referenced tests.

*Differences are statistically significant at the .01 level or better; the technique is analysis of variance; and a t-test is used, since the dependent variable has two cells-- likely and unlikely.

TABLE 4.

Regression Analysis Results: Adopters or Nonadopters and Likely or Unlikely Adopters*

ADOPTERS OR NONADOPTERS (N=318)

Variable	Standard Coefficient (b)	T-Test (two-tail)
Administration	.246	.001
Test Approval	.193	.000
Test Use	.130	.009

LIKELY OR UNLIKELY ADOPTERS (N- 108)

Variable	Standard Coefficient (b)	T-Test (two-tail)
School Board	.422	.000
Data Bank	.223	.005
Test Approval	.211	.009

*Both regression analyses are significant at the .001 level (F test).